



Genetically engineered models (GEMS)

AHR knockout rat

Model	AHR knockout rat
Strain	HsdSage: SD-Ahr ^{tm1Sage}
Location	U.S.
Availability	Live colony

Characteristics/husbandry

- + Background strain: Sprague Dawley
- + Biallelic deletion of AHR

Zygosity genotype

+ Homozygous

Research use

- + Xenobiotic sensor
- + Cytochrome p450 pathways
- + Drug metabolism
- + Hepatotoxicity
- + Cholestasis

Origin

The AHR KO rat model was originally created at SAGE Labs, Inc. in St. Louis, MO and distributed out of the Boyertown, PA facility. The line continues to be maintained through the original SAGE Labs animal inventory acquired by Envigo.

Description

AHR is involved in the induction of cytochrome p450s and is abundantly expressed in the liver and intestine. This model is useful for studying metabolism of xenobiotic compounds and hepatotoxicity.

Figure 1: Loss of Cyp1a1, Cyp1a2 and Mrp3 (Abcc3) induction in Ahr (-/-) rats after TCDD treatment

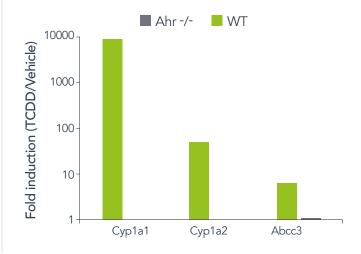


Figure 2: Weight and age comparison chart

